

Accessibility of hearing-impaired people at IFPB through an educational resource in LIBRAS for the practice of handball sportive

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Abstract—Despite advancements in recent years concerning the universalization of access to Basic Education, when dealing specifically with students with a disability, one notes that the effective inclusion of such students is still a great challenge. The inclusion of deaf students in physical education classes, for example, is a growing trend, yet there is still a glimpse of a sensitive gap in the promotion of equal and qualified inclusion due to the difficulties and problems that constantly appear in the process of teaching and learning. The methodology adopted in this research is based on a qualitative approach, configured in terms of basic research with an exploratory objective. Data collection procedures were carried out via bibliographic and patent research. We identified a total of 164 records on the subject (11 references, 16 rare periodicals and 137 general works). However, none of these records are related to sports or to the theme of the project in question (glossary in Libras of technical gestures for handball teaching). In the patent bases, no occurrence was identified for a product similar to the one proposed to be researched. The creation of a technical manual in Libras with technical gestures of handball would minimize these language barriers between physical education teachers and deaf students. As previously explained, the main objective of this research was to analyze the relevance of using educational resources in Libras for technical gestures, equipment and specific terms of handball as a tool to assist in teaching this sport to the student community with hearing-impairment.

I. INTRODUCTION

Inclusive education is a social process that has been developing around the world and gaining relevance in academic studies in these recent decades (EIRAS, 2019). Despite the advances achieved in recent years concerning the universalization of access to Basic Education, when dealing specifically with students with some disability, one notes that the effective inclusion of this student is still a great challenge. The infrastructural demands adequate to their needs - which vary a lot according to the disablement - and, equally, the scarce investments in formation and

training of professionals are obstacles for these disabled students to be properly included in the school space.

According to data published by IBGE (2012), referring to the 2010 Demographic Census, visual impairment was present in 3.4% of the Brazilian population; motor impairment in 2.3%; hearing-impairment in 1.1%; and mental/intellectual impairment in 1.4%. When we consider people with some difficulty in these skills, we found that 18.8% of the population had difficulty in seeing; 7.0% had difficulty in moving; and 5.1% had difficulty in hearing.

The inclusion of deaf students in physical education classes, for example, is a growing trend, yet there is still a glimpse of a sensitive lacuna in the promotion of equal and qualified inclusion due to the difficulties and problems that constantly appear in the process of teaching and learning. According to Melero (2007), school and social inclusion implies a profound change in the content and styles of teaching by most educators. Physical education and sports practice, as an integral part of the basic school curriculum, could not be absent from this process of pedagogical inclusion, and should be considered within the curriculum as a curricular component and not as complementary activities.

The use of new proposals and theoretical-methodological approaches that stimulate creativity, body expression and freedom of movement, as stated by Zuccheti (2011), will provide students with experiences that foster cooperation, sociability and psychomotor development. Specifically dealing with deaf people, Greguol (2010), when arguing that despite the hearing-impairment does not seem to show great commitment to the general development of the individual, the impact of hearing loss can cause serious damage and aggravation if the individual does not have appropriate stimulus.

Therefore, this study sought to analyze the importance of the use of instruments in Libras for technical gestures, equipment and terms specific to the Handball mode, as a tool that presents technical information and enables deaf students to teach a simple, synthetic, illustrative and didactic approach to this mode. Moreover, in addition to the objective importance to the deaf community school, this educational resource has the purpose of serving as a source of knowledge for the training of teachers who work in this sport in physical education classes.

II. THEORETICAL REFERENCE

1. Brazilian Sign Language In Handball Practice

The deaf student usually has no restrictions on their participation in the Physical Education classes, as long as the teacher detaches the deafness from the speech experience and the disability. Motor skills activities, including sports, can be performed ordinarily, as hearing loss is related to a sensorial aspect, which allows the free exercise of physical activities of one's preference through adjustments, that may be effective for their participation (FERREIRA, 2011).

The acquisition of Libras (Brazilian Sign Language), by the Physical Education teachers, has been an allied in overcoming communication barriers and contributing to the development of motor skills levels,

perceptives, cognitives and sociocultural, given that the classes in this discipline have distinct characteristics, permitting greater freedom, turning students more spontaneous, creative and leading to a constant exchange of social relationships. Santana and Bergamo (2005), when discussing about the crossroads of social and theoretical struggles of deaf culture and identity, point out that,

By adopting language as the defining factor of a social identity, even taking into account relationships and conflicts related to the different positions occupied by social groups, its instrumental character is emphasized. Thus, its nature, or its social significance, is credited to the social interactions to which it is connected. (SANTANA and BERGAMO, 2005, p. 568)

This nature of language as a social signifier and foundational point of a deaf culture has been clearly observed. Even so, there is still much to advance. Regarding mainly the methods and practices of teaching in regular schools, we identified that are still insufficient in terms of training and understanding the needs of deaf students when they are inserted in regular classes, spaces of the education system attended by students with and without disabilities.

With the emergence of the International Handball Federation (IHF) in mid-1946, the spread of this sport has become even greater and is gradually improving. Since then, its practice has become democratic in the country and, as Greco (2012) remarks, it is a common sport practice in Physical Education classes, presenting different forms of expression, that is, different levels of performance - school sport (from, to and at school), rehabilitation, health, leisure-recreation, performance, high level of performance and professional sport. Handball is one of the most practiced sports in schools in Brazil. It is played on the beach, in a wheelchair, in the third age, in the master; therefore, it is a sport in which all those who practice it find a group that has their interests and vocations.

Despite this advance, the inclusion of deaf students in this sport is still limited, since most of the information used in the sport dynamics is verbal or visual. In visual terms, the deaf student usually has no difficulties, but when it is only information transmitted orally, it is impossible to understand the information transmitted. Due to the dynamics of sport, the sender is sometimes not aligned or in the same field of view of the deaf student.

Therefore, the creation of signals in Libras in this sports practice can establish your body scheme, your image and unrestricted access to the sports world with bio-

psychosocial benefits so that they can recognize themselves as subjects integrated in these activities in the school environment. The motivation and challenge lies in structuring methodologies, resources and materials that consider rhythms, forms, different stimuli to learn and enable to think in an inclusive and participatory education for all in return for the hegemonic proposals of teaching and evaluation.

The teaching of sports when approached in the practical context presents an enormous variety of specific gestures in its execution and, to insert someone in a group is to give him/her conditions so that he/she can participate actively in the ideas and activities of the same. The need to develop a specific vocabulary for the sport handball that is taught at the IFPB Campus Campina Grande, has become part of the teaching and learning process, once there is a significant share of deaf students with difficulties in understanding the basic principles of sports, as well as to properly instrumentalize the teachers.

We observed the possibility of creating a glossary in Libras with technical gestures, equipment and terms specific to the sport for different sports, thus facilitating the teaching of these modalities both for deaf students, as well as teachers, technicians and other individuals in this context. There are several reports in the literature of advances in projects of translators and other applications for deaf (MELERO, 2007; OLIVEIRA et al, 2017; EIRAS, 2019).

III. MATERIALS AND METHODS

Due to the initial hypothesis of the absence of signs in Libras in the specified context, the present project was developed with the objective of analyzing the existence and pertinence of the use of educational resources in Libras for technical gestures, equipment and specific terms of the Handball modality as an aid tool for the teaching of this sports practice with the student community with hearing-impairment.

The methodology adopted in this research is based on the premises of a qualitative approach, being configured in a basic research of exploratory objective. With data collection procedures carried out via bibliographic and patent research. Initially, a literature review was conducted, consisting mainly of books and scientific articles, which grounded the reflections presented in the theoretical framework. Then, a data collection was made, in this study identified by search of precedence, in documents taken from academic databases that referred to "Signage in Libras", whose focus of

exploration was concentrated on the innovative character of the product and not on statistical data.

Based on this demand, we chose to perform a search for anteriority to verify the existence or not of such tool or anything resembling with similar functionality. This type of search is configured in a research activity on technological information that attests to / proves the existence or not of a product, a process or improvement that is akin to the object being questioned. This research must be wide-ranging and must cover both the bibliographic research and the search in patent databases.

The research was carried out between the months of October and November 2019 and was in the site of the National Library (copyright records), in the National Institute of Industrial Property - NIIP, Patentinspiration and Google Patents (patents) and in the periodicals Capes, Scielo and Google Scholar (academic works). They were used as keywords: deaf, language, Libras and sports (in Portuguese at NIIP, Capes, Scielo and Google Scholar) and deaf, language and sport (in English at Patentinspiration).

IV. RESULTS AND DISCUSSION

The National Library's website has searched for copyright records of books, booklets, manuals and dictionaries entitled "Brazilian Sign Language". A total of 164 records on the subject were found (11 references, 16 rare periodicals and 137 general works). However, none of these records are related to sports or to the theme of the project in question (glossary in Libras of technical gestures for handball teaching). In the patent bases, no occurrence was identified for a product similar to the one proposed to be researched.

This time, we identified the absence of these educational tools and therefore verified the need to provide these tools, not only to the IFPB Campus Campina Grande, but to the teaching network as a whole, for the implementation of the teaching-learning process of deaf students in sports practices. The project of an instrument that can help in the translation of gestures related to Handball for Libras that describes, for example, positions, materials, technical gestures, rules and marking the courtis presented in Chart 1.

Therefore, after this study, we will develop a specific signage for handball that meets the demand. To this end, we conducted a survey of terms to be created to represent the dynamics of the game and its translation to Libras.

V. FINAL CONSIDERATIONS

Language barriers are still a major obstacle to the inclusion of deaf students in the practical context of physical education classes when sports are approached, as in the case of handball. It is necessary that educational institutions insert inclusive education in their institutional programs of teacher training (curricular and continued). By providing content that enables both future and current teachers to work with students with special needs.

The creation of a technical manual in Libras with technical gestures of handball would minimize these

invasion, foul of attack, stop, hold or push, foul, time - out or time). However, those were indicative gestures and were added to Libras, becoming part of the Brazilian sign language through the manual.

Thus, the possibility of creating this manual would allow more accessibility to the participation of deaf students in practical classes, since, through it, it would be possible to understand the basic principles of the sport, as well as allow teachers and coaches to work the content more comprehensively during the classes.

Regarding inclusion, the manual would

Chart 1 - Terms in Libras created for the handball modality

Team Players	Balls	Technical basics	Rules	Court marking
- left wingman	- ball size 1	- shooting	- 7 meter shot penalty throw	- goal area line
- left backcourt	- ball size 2	- chest pass	- goalkeeper throw	- free throw line
- center backcourt	- ball size 3	- one-handed shoulder pass	- throw in	- seven meter line
- right backcourt		- pick pass	- goal	
- right wingman		- jump shot	- double dribble	
- pivot		- standing shoot	- two minute suspension	
- goalkeeper		- receiving	- disqualification/exclusion	
		- dribble	- attack foul	
		- feint	- holding the opponent	
			- hitting	
			- team time-out	
			- free throw	

language barriers between physical education teachers and deaf students. As already exposed, the main objective of this research was to analyze the relevance of using educational resources in Libras for technical gestures, equipment and specific terms of handball as a tool to assist in teaching this sport with the student community with hearing-impairment.

The manual presents itself as a possibility of an instructional tool, mainly in practical classes, since in the dynamics of a handball game, it is not possible for the interpreters of Libras to act, since these professionals cannot track the students during the dynamics of the game. Frequently, it is left to the judgment of the one who conducts the game (teacher or arbitrator) to signal to the practitioners the actions and commands pertinent to the practice of the referred sport. Some signals are already used by handball referees being contained in the rule book (free throw, goal throw, overlap, 2 dribbles, exclusion for 2 min., disqualification/exclusion, area

promote greater interaction between deaf students and hearers, since deaf students tend to interact primarily with other deaf due to language barriers imposed naturally. This is because of the inclusive characteristics that every collective sport promotes in its practice. The insertion of Libras in the practical context of physical education classes should arouse greater interest of teachers and students listeners and thus spread the Brazilian sign language in a very broad way, significantly improving the inclusion and socialization of deaf students in the school context.

As can be seen in this research and other scientific literature, one of the major problems concerning inclusion is the lack of preparation of teachers to deal with deaf students, since these students depend solely and exclusively on the interpreters to develop the content. Therefore, based on the above, we emphasize that the technical manual in Libras is a very efficient tool for inclusion in the teaching of handball in physical education

classes. This resource, besides allowing a greater understanding of knowledge is a very effective tool for the inclusion of hearing-impaired youth.

It is interesting to point out that it is urgent that the undergraduate courses include in their curriculum, subjects aimed at attending not only deaf students, but also students with other types of disabilities. As well, it would be pertinent that the training institutions themselves invest in the continued development of teachers and technicians to meet this growing demand in our society.

As future works, we intend to develop an Open Educational Resource in book format that is a Handball Technical Gesture Manual for Physical Education classes. Aiming that this instrument can contribute significantly as a teaching resource used in physical education classes.

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